SPECIFICATION FOR DOMESTIC WATER HEATERS

Instantaneous, U-tube Water Heaters with Nickel-Plated Shell
And Boiler Water as the Energy Source

Furnish and install the following **QuickDraw**® water heater(s) as manufactured by PVI INDUSTRIES, INC of Fort Worth, Texas.

Qty	Model Number	GPM Recovery 40° to _____°F	Inlet Boiler Water Temperature °F
____	_____	_____	_____
____	_____	_____	_____
____	_____	_____	_____

Pressure Vessel and Heating Surfaces

The water heater will be constructed and stamped in accordance with Section IV, Part HLW of the ASME code. The water heater will be National Board Registered for a working pressure of 150 psi and will be pressure tested at 1-1/2 times working pressure. All tank connections will be nonferrous.

The heat exchanger will be a _____ single-wall or ____ double-wall (atmospherically vented), copper u-tube bundle with nonferrous waterside tube sheet, baffles, and tie rods. Heat exchanger will be constructed to ASME code and rated for 150 psi and 300°F service.

Tank Lining

The tank will be a plated with electroless nickel (EN). Plating will occur after the pressure vessel is completely fabricated and all welding is completed. The EN plating will be a high-phosphorus (10%) and nonporous composition suitable for submersion service (ASTM B733 standard may be used as a guideline). The finished lining will not require sacrificial anode rods. For additional protection against galvanic corrosion, which may occur within the potable water system, the electroless nickel plating may have a high-dielectric-strength polymer overcoat.

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(continued)

Boiler Water Controls

Inlet boiler water is introduced to the heat exchanger through an on/off boiler water pump. Pump is activated and de-activated as instructed by a microprocessor-based temperature monitoring device with a "feed-forward" flow and temperature sensor submerged near the hot outlet of the shell. Tank temperature may be continuously blended by an intra-tank circulating loop. Components will work together to maintain outlet water temperature within 5 degrees of setpoint.

Safety Controls

As a minimum, the heater will be equipped with the following:

- a microprocessor-based temperature monitoring device and boiler water pump activator
- an *immersion* temperature sensor
- an *immersion* operating thermostat
- an *immersion* temperature limiting device
- an ASME- or AGA-rated temperature and pressure relief valve

If selected, the water heater will be equipped with the following optional equipment.

____ intratank circulating loop

____ circulating loop flow switch/low water cutoff

____ manual-reset , temperature limiting device

____ solenoid overtemperature tank purge valve

Warranty Summary

Heat exchanger will have a _____ one year, _____three-year warranty. All other heater parts will have a one-year warranty. Storage tank will have a ten-year warranty covering manufacturing or material defects, and/or the production of rusty water. If indicated here, the heater will also have a _____ first year or ____ long-life service policy, which will cover replacement labor and freight costs under certain conditions. This summary is not a warranty. Consult warranty and policies for full details. **Complete copies of all warranties and service policies, including all exclusions and conditions, will be presented to the owner as part of the submittal package.**

(continued)

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(continued)

Finishing

The water heater will be completely factory packaged, requiring only job site hookup to utilities and domestic water piping. The heater will be insulated to meet current ASHRAE standards, jacketed in dent resistant PVC, and mounted on heavy-duty stand or wall bracket. The heater will fit properly in the space provided and installation will conform to all local, state, and national codes. For a list of selected optional equipment, see form PV 6351 or PV 6358.

Start Up

Start up on the unit will be performed by factory trained and authorized personnel. A copy of the start up report will be provided to the owner.

Quality Certification

The water heaters will be manufactured by a company that has achieved certification to the ISO 9001 International Quality System, which requires regular external auditing of all order entry, engineering design, and product manufacturing processes.